

"GONORRHOEAL RHEUMATISM
WITH DETAILS OF A NEW METHOD OF TREATMENT".

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by

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H I S T O R Y.

Credit for associating painful joint lesions with concomitant urethritis has been assigned by various writers to either Storck whose writings were published about 1771 or to Swediaur in 1784.

John Hunter in 1716 in his Treatise on Venereal Diseases says "I know one gentleman who never had a gonorrhoea but that he was immediately seized with rheumatic pains and this happened several times."

Sir Benjamin Brodie in his Pathological and Surgical observations on Diseases of Joints (1818) describes five cases of gonorrhoeal arthritis.

After the discovery of the specific organism of gonorrhoea in 1879 by Neisser, Hock obtained the gonococcus from the knee joint of a child with gonococcal ophthalmia and Neisser isolated the organism from the effusions in the knee and ankle of an adult suffering from urethritis.

Bordon - Affeduzzi obtained the gonococcus from an infected joint and successfully implanted a gonorrhoeal infection on a virgin urethra.

STAGE IN THE DISEASE.

Infection of the joints is possible in ^{the} course of an acute urethritis at any time after extension of the disease to the posterior urethra. This usually occurs in the third or fourth week of the disease, that is the 14th - 28th day, but in some few cases notably alcoholics, the extension is more rapid. But as a rule, if gonorrhoeal rheumatism occurs before the fourth week of the disease, one suspects that the condition is one of relapse, or that previous gonorrhoeal rheumatism has existed. If a previous prostatic examination per rectum has been performed and nothing abnormal found, one is justified in believing that previous gonorrhoeal rheumatism is the accelerating factor if a history of such is given. Unfortunately in the great majority of cases giving a previous history of long continued discharge with or without joint complications, one finds the monument of incomplete cure, - a chronically thickened vesicle. Quite a number of such cases gave a history of purulent persistent discharge suddenly disappearing. The hapless man was given eight days quarantine and then discharged cured, while all that had occurred was/

was blockage of the ejaculatory duct. This same reason explains why in acute epididymitis we often see cessation of discharge for a few days before the epididymis flares up. This apparent cure commonly gives rise to that quasi paradoxical syndrome of (1) acute epididymitis, (2) acute arthritis, (3) purulent discharge within forty eight hours of exposure to fresh infection or indulgence in alcohol. This may occur at any date after the original and only infection. In my own experience I have seen two cases after fifteen years, one after thirteen and one after twelve years freedom from any discharge or definite symptom.

On occasion of course, one does meet with a patient with a characteristic acute fresh gonorrhoea who also possesses a chronically inflamed prostate or vesicle, and in the majority of cases no recognised mode of treatment will give that patient freedom from urethral discharge.

To summarise, gonorrhoeal rheumatism may occur at any time after the fourteenth day of an acute fresh infection and an uncured gonorrhoea may give rise to this complication at any moment in the patients history.

CONDITIONS IN THE GENITAL TRACT.

As described above, I am of the opinion that previous infection of a vesicle is necessary in a gonorrhoeal metastasis whether to eye, tendon or joint. Per rectum one or both vesicles are palpable and varying degrees of tenderness are present depending largely on the chronicity of the lesion. In a large percentage of cases, the prostate is also infected and should the joint infection supervene on an acute posterior urethritis, the prostate becomes excessively swollen, oedematous, and tender.

In every case of joint infection that I have treated, the vesicle of the same side as the first joint attacked has been the most severely infected of the two vesicles and commonly has been the only one. I do not know why this should occur and regard it as a singular coincidence.

As opposed to iris infections, the urethral discharge which in joint infections is usually present is generally of the morning drop type. The appearance of a greater urethral discharge of decided purulence is to be hailed with delight as it most probably indicates that the affected vesicle is draining freely into/

into the prostatic urethra. The patient soon experiences relief of pain in the joint and the effusion subsides as a result.

CONDITIONS IN THE JOINTS.

The classification given in Osler and Macrae's System of Medicine is the simplest and most comprehensive.

(a) Arthralgic type.

In this condition the symptoms are altogether subjective. The patient complains of pains in the muscles and joints, but no redness nor swelling can be made out. Tenderness is not present. Stiffness and slowness of active movement are apparent.

(b) Polyarthritic type.

This is the typical gonorrhoeal rheumatism. One joint is usually affected to begin with and soon after several joints become affected almost simultaneously.

The/

The joints are swollen and the overlying skin is red and great tenderness is present. In my experience the peri-arthritis tissues are not oedematous but the joint cavity is tense with fluid - synovial fluid + sero-purulent exudate.

The joints first affected are commonly those of the lower extremity. Generally the knee is first to be inflamed, then the ankle and hip, and the joints of the foot. There is no definite sequence of events but it is unusual to see two joints in one limb affected without one or both of the corresponding joints in the other lower extremity becoming inflamed.

Any joint in the body may show signs of infection and special emphasis has always been laid on the involvement of the sterno-clavicular and temporo-mandibular joints because of the freedom from infection of these joints in acute rheumatism.

According to Finger - Die Blenorrhagic der Sexual Organ (1905):-

In 376 Arthritises the frequency of infection of the various joints was as follows:-

Knee	-	136
Ankle	-	59
Wrist	-	43
Digits	-	35
Elbow/		

Elbow	-	25
Shoulder	-	24
Hip	-	18
Temporo Maxillary	-	14
Metatarsal	-	7
Sacroiliac	-	4
Sternoclavicular	-	4
Chondrocostal	-	2
Inter-vertebral	-	2
Tibiofibular	-	1
Cricoartyneoid	-	2

The influence of occupation on the joints selected by the disease is well known and I have been struck by the large incidence of sacro-iliac and acromio-clavicular arthritis in sailors. I feel certain that changes occur in the sacro-iliac joints of all who go down to the sea in ships analogous to those/

those that occur in the parturient woman. The lurching gait of the sailor is typical and is due to the presence of a mobile joint between the sacrum and ilium.

As time goes on one joint after another clears up but the last to get well is always the joint originally infected. Especially marked is the muscular wasting about this joint.

At the ankle and wrist in poly-arthritic rheumatism the condition differs from that seen in the other joints. In all other joints the outstanding feature is the actual distension of the joint with exudate. In the ankle and wrist on the other hand the distinctive feature is the involvement of the tendons in the neighbourhood of the joint. At the ankle the peronei and flexor tendons are most affected and at the wrist the extensor tendons. The condition in these situations is very chronic and long after pain/

pain and tenderness have gone, thickening of the tendon sheaths and swelling sufficient to obliterate the inter tendinous spaces persists.

CHRONIC HYDRARTHROSIS TYPE.

Here the joint selected is generally the knee. The onset is insidious. There is little if any pain. No redness or tenderness is apparent, but the joint is almost full of fluid though rarely tense. There is also considerable peri-arthritis oedema. The patient's complaint is of inability to move the joint and of difficulty in bearing the weight of the body on the affected leg. Occasionally pain comes on at night sufficient to deprive the patient of sleep.

The condition is usually mono-articular but fairly commonly there is a transient hydrarthrosis of the corresponding joint in the opposite limb. It is usually very chronic and very few pus cells are obtained in prostatico-vesicular smears or in fluid withdrawn from the joint.

The urethral discharge is always mucoid in character and to my mind the condition implies low resistance/

resistance to the gonococcus.

The patient in Polyarthritic gonorrhoeal rheumatism is generally pale and anæmic. He is wasted in greater or less degree and his skin is dry and sallow.

The temperature is generally raised, but slightly. At the onset, temperatures up to 103° are fairly often seen but as the disease progresses a temperature of 99° to 100° is more common.

The appetite is poor and the patient is generally dejected. Sleep in the acute stages is absent and this very often constitutes one of the main complaints.

Position is always cramped and the weight of the bedclothes is too much for the patient to bear on the affected joints.

A peculiar tapering of the fingers is seen if the elbow, wrist or one of the small joints of the carpus or metacarpus is affected. This appearance of tapering is more apparent than real but constitutes a very constant sign. I have never seen it in acute or chronic rheumatic affections, but in tuberculosis disease of these joints it may be seen late in the disease. The appearance is due in part to a loss of tissue about the sides of the nail and also to the total or partial obliteration of the skin folds on the/

~~at~~ the dorsum of the interphalangeal joints especially of the distal joint. It is typically exemplified in gonorrhoeal arthritis of the wrist in the index finger. A similar though less marked condition is seen in the toes when the ankle is affected.

T R E A T M E N T.

Treatment resolves itself into:-

- (1) Rest for affected joints.
- (2) Extirpation of the genital infection.
- (3) Early and drastic abortive treatment of the affected joints.
- (4) Tonic treatment.

Rest in bed is essential for all cases where joints of the trunk and legs are affected and it must be specially enjoined for many days after apparent cure, more particularly in cases of ankle infection because of the involvement of the plantar tendons. Should the patient not be strictly kept in bed, flat foot will most assuredly develop.

In/

In elbow, wrist and hand joint infection, the patient may be allowed out with a sling to support the forearm and hand, and should the wrist be affected an angled splint to keep the wrist in a condition of dorsiflexion is necessary.

The genital infection is best treated by daily prostatic-vesicular massage during the stage of acute inflammation of the joints and by bi-weekly massage and topical applications in the later stages. Before massage each patient is instructed to fill his bladder with 1/5000 Silver Nitrate or Oxy-cyanide of Mercury 1/8000 after thorough lavage of the anterior urethra following micturition. By this method smears of prostatic-vesicular fluid will show the progress of the condition by the incidence of pus cells per microscopic field.

The position most suitable for expression of the contents of the vesicles since it makes these more accessible is obtained by causing the patient to lie supine with the lower part of the sacrum at the edge of the table on which he lies. The hips and knees are then flexed so that the heels rest on the edge of the table just external to the hips. The head and shoulders are supported by one pillow and the patient is quite comfortable during the operator's manipulations. A satisfactory modification of this position when the knee/

knee joints are effected is attained by having the patient's ankles supported while he lies with legs extended and abducted.

By a system of weekly pus cell per field counts under 1/12 objective, I was able to prove to my own satisfaction that 5% "Argirina" a ses-albuminate of silver of Italian origin was superior to Silver Nitrate 1 - 4%, Methylene Blue in Glycerine, (Methylene Blue, 1 Glycerine, ²⁵Water ad. 100) and Protargol 5% or Prostatic Massage alone. These experiments showed that while instillation of the Post^r Urethra prior to massage with Argirina 5% reduced the pus cells per field at the rate of two per diem "Protargol" reduced them at the rate of 1.25 per diem. Silver Nitrate 1 per diem and Methylene Blue and Prostatic Massage alone at the rate of .75 per diem.

Besides this direct treatment the general measures for the relief of joint infection have a beneficial influence on the genital infection.

Tonic treatment includes measures such as massage, hydrotherapy and radiant heat while general tonics such as mixtures containing iron, arsenic and strychnine do much to help the patient in the convalescent stage.

Abortive treatment to the affected joint is usually/

usually of a general nature - intravenous, intramuscular, or subcutaneous injections of various substances though (1) Debré and Paraf report benefit from aspiration of the affected joint followed by intra-articular injection of antigonococcal serum.

Injection of chemical compounds has been advocated by (2) M'Donagh - "Intramine" two 1.5 cc. intramuscular injections at an interval of three days followed by 2.5 cc. a week later. This treatment, he states, is enhanced by the intravenous administration of Collosol Iodine 100 cc. on the day proceeding.

(3) Levy Bing and Duroeux recommend Sulfarsenol 3 to 5 injections varying in dosage from .06 grms. to .18 grms. or in some cases up to .36 grm.

(4) Stern and Ritter have tried Sodium Iodide in 10% solution in doses of 20 cc. intravenously. Daily injections are given and it is stated that no reaction whatever follows and thus it may be given in the consulting room and the patient given leave to continue his occupation.

Intravenous injections of Colloidal Sulphur and mercury are advocated by (5) Mukerjee. The original dose is η IV followed in 48 hours by η VI. The increase of η II every 48 hours is dependent on their being/

being no reaction.

The rational treatment by injection of anti-gonococcal serum and gonococcal vaccine (5) has produced successful results in numerous cases but the majority of cases are resistant to ordinary vaccine methods and dosage.

Better results have accrued from the use of foreign protein. (6) Fraser and Duncan reported on the beneficial results of treatment by massive doses of non-specific vaccines and diphtheria antitoxin of mature age.

Harrison (7), Miller and Lask (8), and Reensterna (9) have had excellent results in chronic cases with the injection of large doses of anti-typhoid vaccine.

More astonishing are the results published by Nolf (10), following the injection of peptone solution intravenously. The reaction is excessively severe and relapse is prone to occur if further injections are not given.

Intramuscular injections of milk have been employed. Divergent views on its utility are expressed by (11) Schulman who has had success and by (12) Trossarello who has failed to note any improvement.

In the treatment of over 30 cases of arthritis occurring/

occurring in my own practice, I have adopted a method - partly chemical and partly rational vaccine.

The chemical substance used was colloidal silver in the form of "Electrargol" and the vaccine was the mixed vaccine made by Sir Almroth Wright containing 500 million gonococci per cc. together with staphylococci, streptococci, B. coli.

Isotonic Electrargol is a dark brown almost opaque liquid containing silver in colloidal solution. The dosage recommended is from 10 cc. to 20 cc. but I have only given 20 cc. doses on four occasions (Case 1.) Electrargol has been employed in many affections both local and general including pneumonia and syphilis and Luys recommend its use in local injections into the inflamed epididymis after aspiration of that organ.

The routine for giving intravenous electrargol is substantially the same as for giving intravenous neosalvarsan. Previous experience in giving intravenous injections is necessary since one must know well the sensation of having the needle lumen in the vein. Electrargol is of so dark a colour that the entrance of blood into the syringe is not observed. The patient ought to be in bed and have Ac. Aceto-salicylic gr. xv. immediately before the injection and again four hours later. I am of opinion that this materially shortens the pyrexial reaction which follows. The/

The patient is well covered with blankets, and hot water bottles ought to be kept in readiness.

In the typical case and especially after the first and second injections, the patient complains of inability to keep warm and in from half an hour to two hours a rigor comes on. Thereafter the patient feels warmer and sweating supervenes. Sometimes the sweating and radiation of heat is so great that the patient has the appearance of "steaming". If questioned, patient will say that he feels the electrargol "working" in his joints. This may be due to the unwonted movement of the rigor but in many cases where no rigor developed the same aching was complained of. Temperature at this time is rarely above 102°.

About six hours after injection in the most satisfactory type of case a remarkable change has occurred. The patient is free of all aching and pain on movement and may proceed to demonstrate his new found power by moving his limbs vigorously under the bed clothes. The general demeanour of the patient in almost all cases has changed considerably. Despondency has given place to exaggerated optimism and one is better to caution the patient about his future and restrain him from moving his joints overmuch.

The night is spent in sleep and to many patients this/

this is a great boon. Time and again patients have reported that they had slept all night for the first time for many days and perhaps weeks. Sleep previous to the administration of electrargol had been extremely fitful on account of the starting pains which had come immediately the muscle defence of the inflamed joints had relaxed. Case 2, who, on admission as a cot case, lay with his right leg everted and the left side of his body raised from the bed, reported that after the first injection he had gone to sleep in that strained position and awoke next morning lying on his left side and with his right leg flexed at the knee.

The following morning it is usual for the patient to complain that he is not quite so well. This is found to refer to the fact that the affected joints are rather stiffer than on the previous evening. There is little, if any, aching and the stiffness passes off in the course of the day.

The second injection is given forty eight hours after the first and with it one may combine a prostatic massage. The following day one is able to see the decrease in the joint effusion. Bony landmarks are becoming visible, local heat is scarcely perceptible and redness over the joint has entirely disappeared.

Further/

Further injections of "Electrargol" are given at two daily intervals and these are combined with massage of the prostate and stripping of the vesicles until the joints return to normal. In this connection it is advisable to state that a slight transient hydrops of a joint may recur. This I am inclined to ascribe to (1) further auto-inoculation from the focus in the prostate and vesicles. (2) too vigorous and prolonged movement on the part of the patient who imagines that because all pain has gone his joint is entirely cured. To support the second theory one discovers certain tender areas about the affected joint corresponding to the osseous attachments of the articular ligaments or muscles.

The above description relates to the effects following a 10 cc. initial injection. By employing 5 cc. only and by giving the first injection intramuscularly the same therapeutic effects are produced without the undesirable rigor.

Further phenomena observed were the development of herpes labialis in 16% of cases, ^{and} urticaria in 5% of cases. In one patient, urticaria developed after both the second and third injections. No albuminuria occurred in any case treated.

Of interest in view of McDonagh's theory that the positive/

positive Wassermann is due to an increased number of protein (colloid) particles in the blood is the fact that the Wassermann reaction of patients treated by Electrargol was "Positive" by the cold fixation method provided the blood was withdrawn within 24 hours of the injection.

The perfected routine treatment is appended:-

1st day	-	5 cc.	Electrargol intramuscular
2nd day	-	5 cc.	Electrargol intravenous Prostato-Vesicular Massage
3rd day	-	10 cc.	Electrargol Prostato-Vesicular Massage
4th day	-		Prostato-Vesicular Massage
5th day	-	10 cc.	Electrargol Prostato-Vesicular Massage
6th day	-	•1 cc.	Wright's Vaccine
7th day	-	10 cc.	Electrargol
8th day	-		Prostato-Vesicular Massage
9th day	-	•2 cc.	Wright's Vaccine
11th day	-		Prostato-Vesicular Massage
12th day	-		Prostato-Vesicular Massage
13th day	-	•4 cc.	Wright's Vaccine
15th day	-		Prostato-Vesicular Massage
16th day	-		Prostato-Vesicular Massage
17th day	-	•6 cc.	Wright's Vaccine
19th	-		Prostato-Vesicular Massage

Should/

Should the negative phase following the vaccine injection result in arthritic pain and effusion, the administration of 10 cc. Electrargol acts as a specific. When it was to break down adhesions in a mal treated joint 10 cc. of electrargol was given on the table and in no case did metastasis to the iris or unaffected joints occur, nor was there acute exacerbation in the affected joint.

In gonorrhoeal metastatic infections of the eye electrargol has been of great service and three cases of eye infection are reported below, together with three cases of joint infection which show the rapid therapeutic action of this preparation.

CASE 1. Treated by five 10 cc. Electrargol, one 15 cc. and four 20 cc. Electrargols.

History. Original infection 1912.

Six weeks later patient suffered from arthritis of right ankle and left shoulder.

Discharge disappeared and iritis supervened.

In 1916 a relapse of purulent discharge occurred and this disappeared as suddenly as it came.

Until 1919 patient had no further trouble but in that year another attack of iritis came on and discharge again appeared.

In April 1920, conjunctivitis caused patient to be discharged to hospital. No discharge present and prostatic smears showed epithelial cells only. When the eye condition improved, patient was discharged to duty.

Within a week patient was re-admitted to the eye ward suffering from conjunctivitis complicated by arthritis.

The eye condition was again cured and patient was transferred on 14th June to the venereal block.

On admission to this section, patient had no discharge or threads in the urine. Prostatic smears were negative for pus cells and gonococci. The right ankle/

ankle joint and more especially about the tendons of the long plantar flexors was red and oedematous and tender; the right knee was tense with fluid and was extremely painful and the right sacro-iliac joint was swollen and tender. In swift succession the infection involved the acromio-clavicular joints and the left knee. Patient complained of lack of sleep and looked extremely ill. Prostatic massage after the passage of large sounds up to 28 - 32. Charriere on one occasion only produced pus cells to the extent of four per field (1/12 objective) but no gonococci were demonstrable.

Stock vaccine containing gonococci and secondary organisms was tried and patient was a little improved but was sleeping less than one hour per night and aching was constant. Temperature oscillated between 99 and 100. Since admission radiant heat and light massage of the muscles acting on the joints had been employed.

On 11th July patient was losing hope and it was decided to give an intravenous injection of Elect-rargol which had been procured for a vasostomy case.

An hour after injection patient had a severe rigor. Temperature 102°. Six hours later temperature was 100° and twelve hours later patient was sweating profusely and temperature was 102°. At 8 p.m. next/

next morning temperature was 98.4° (20 hours after injection) and at 10 o'clock, patient walked up a flight of stairs (27 steps) with the aid of a stick to have prostatic massage. His expression was radiant with joy and he stated that his knees were free of pain and gave it, as his opinion that "another two injections would see him back to duty".

In all ten injections were given this patient at three daily intervals.

The following is a resumé of progress:-

12th July	Patient slept all night from eleven o'clock till six next morning.
14th July	Knees are free of pain and swelling is appreciably less. Other joints though improved are still aching a little.
17th July	The ankle is still swollen in region of tendon sheaths below internal malleolus but patient states that he has no pain there. The left acromio-clavicular joint is still troublesome and aches.
20th July	Pain has now entirely gone from the left shoulder but patient has discovered a tender area on the sacrum corresponding to the short posterior sacro-iliac ligament Rt. There is still a chronic thickening below the internal malleolus Rt. and patient complains of pain in the sole of foot under the bony instep. Patient was cautioned to lie up and not bear any weight on the foot.
8th August	No pain or aching anywhere. The inter-tendinal spaces about the right ankle can be recognised. Massage treatment continued and patient was discharged to duty in perfect health on 21st September.

CASE 11. Treated by 2 x 5 cc. }
4 x 10 cc. } Electrargol.

Age 24.

Contracted gonorrhoea in Malta 3rd July 1920.

Bursitis left knee - 17th July 1920.

Arthritis right knee - 7th August 1920.

Admitted 27th August 1920.

Patient was extremely thin and emaciated.

He was racked with pain and presented an appearance consistent with the final stages of pulmonary tuberculosis.

The bursitis had been drained and was healed but patient had had no sleep since 7th August. There had been no improvement in the joint condition.

The right knee was tense with fluid and patient could not bear to have one touch it. The joint was absolutely fixed and patients decubitus very strained.

The right leg lay everted on the bed and patient rested partly on his back and partly on his right side. The left leg was flexed at the hip and knee and was adducted as if to protect the right knee. He states that he had kept this position for almost three weeks and dared not sleep.

On 28th August 5 cc. Electrargol was given intra-
venously/

intravenously. He had no rigor or rise of temperature and slept for six hours that night.

Next morning he found that he had turned during the night without feeling any pain.

The joint was perceptibly less swollen and patient could bear to have it palpated.

In a week's time all pain and fluid had gone and flexion to more than a right angle was possible.

Massage and movement were carried on and the urethral condition treated.

Within two months, patient was fit for full duty.

CASE 111. Treated by six injections of Electrargol and vaccine at four day intervals.

History: Gonorrhoea 1911 and had a gleet ever since.
 Arthritis in 1919 without further risk.
 Exposed to infection 22nd September 1920.
 Purulent discharged noted 30th " "
 No sleep for two nights since developement of arthritis in right hip.

Admitted on 7th October 1920.
 T. 102°
 Right hip swollen and exquisitely tender.
 Patient dare not turn in bed or attempt the slightest movement.
 8th October - 10 cc. Electrargol intravenous.
 6 p.m. No aching in hip.
 Hip can be fully flexed and patient can turn in bed.
 18th October. Patient was able to walk about in the ward easily and without limping.

CASE IV. Case of iritis with arthritis both shoulders, left knee and both hips, treated by one 5 cc. and two 10 cc. Electrargol.

History: Gonorrhoea 1916.

Syphilis 1919.

No further risks since syphilitic infection.

30.6.20. Admitted with arthritis of shoulders, right knee and both hips.

21.7.20. Conjunctiva injected.

Iris fixed.

Cornea cloudy.

31.7.20. Condition as above. Conjunctiva like a lake of blood.

Joints aching. Movement very limited.

Electrargol 5 cc.

1.8.20. Appearance of eye greatly improved. The injection of the conjunctiva is now moderate and the individual vessels can be seen.

3.8.20. Eye very much better.

Patient states that his vision is very much better. Joints painless. Seen by eye specialist - report:-

"This man has got extensive posterior
"synechiae and deposits on lens capsule
"right eye following irido-cyclitis".

Transferred to eye ward and discharged to duty.

15.9.20 Vision Right eye 6/6
Left eye 6/6.

CASE V. Case of iritis without joint involvement treated by 8 x 10 cc. Electrargol.

History: Contracted gonorrhoea February 1920.
Double iritis developed in April while discharge was still purulent. Two months sick. No arthritis. Iritis in left eye developed 20.7.20. No discharge.

Admitted 28.7.20.

Iris fixed. Conjunctiva very hyperaemic.
Vision dim. Throbbing pain in left eyeball.
Electrargol 10 cc. given.

29.7.20. Injection of conjunctiva has all but disappeared. A faint circumcorneal salmon pink ring still persists. Throbbing pain has gone.

2.8.20. Report from eye specialist:-

" This man must have had a severe
"irido-cyclitis left eye. There are
"posterior synechiae present with some
"deposits on anterior lens capsule and
"also remains of exudate into anterior
"part of vitreous which is muddy. All
"active inflammatory signs have disappeared"

6.9.20. Patient has not relapsed and is fit for duty.

CASE VI.

Case of metastatic conjunctivitis treated by
2 x 5 cc. electrargol and 5 x 10 cc. electrargol.

Eight weeks after infection patient developed a severe purulent conjunctivitis with intense oedema of the lids, photophobia, throbbing pain in the temple and hot flushings in the right eye. There was no urethral discharge. A few days later the left eye followed suit.

Smears from the eye showed no gonococci and the only organism grown was a white staphylococcus.

Patient got no sleep at night and was extremely depressed.

1.12.20. Electrargol 5 cc.

2.12.20. Patient slept all night. Throbbing has diminished and the hot flushings have entirely gone.

Electrargol 5 cc.

3.12.20. Discharge is decreasing rapidly, and the symptoms are ameliorating.

Daily electrargol 10 cc. was then given and on the 8th December there was no discharge, nor pain, nor photophobia.

Local Treatment - Saline only.

Eye shades.

A further eye condition which occurs commonly in gonorrhoea coincident with joint infection is hyperoemia of the conjunctiva without exudate or oedema of the lids. One eye is commonly affected but both may be involved. Three such cases occurred in this series of thirty cases and the administration of electrargol caused immediate disappearance in all three cases. For this type of case Surgeon Commander S.F. Dudley, M.D., Royal Navy, has suggested the name "toxic conjunctivitis of gonorrhoea" to distinguish it from the much less common condition of metastatic conjunctivitis.

C O N C L U S I O N S .

In all cases of the arthralgic and polyarthritic types of gonorrhoeal rheumatism and in all eye sequelae electrargol in 5 - 10 cc. doses appears specific in relieving pain and reducing inflammation.

In chronic hydrarthrosis the results were less convincing. Pain was relieved but peri-articular oedema persisted in spite of the fact that joint effusion diminished. Relapse of joint effusion was the rule, if electrargol was discontinued. Probably the more conservative method of applying Scott's Dressing to the joint yields better results.

The boon of sleep and the reduction of the slightly raised temperature to normal or subnormal ameliorated the patient's physical condition.

The bad effects of electrargol are ephemeral and provided a man is in a fit condition to contract gonorrhoea he is in a fit condition to have electrargol. I have given intramuscular injections of electrargol to a man aged 67 and intravenous electrargol to another aged 59 with no ill effects whatsoever.

A course of 2 x 5 cc. and 2 x 10 cc. is ample for the average case of gonorrhoeal rheumatism. Thereafter the continuance of prostatic-vesicular massage and vaccine therapy will complete the cure of the genital focus.

